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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,111	09/10/2004	Matthew D Walker	36-1836	4154
23117 7590 12/17/2007 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER ROBERTS, JESSICA M	
			ART UNIT 2621	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/507,111	Applicant(s) WALKER, MATTHEW D	
	Examiner Jessica Roberts	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>06/08/2005</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of

the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the claimed invention is directed to non-statutory subject matter. Claims 9-11 and 17-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 9 and 17, which define a computer a storage medium carrying computer readable code representing instructions.." with descriptive material. While "functional descriptive material" may be claimed as a statutory product (i.e., "manufacture") when embodied on a tangible computer readable medium, computer a storage medium carrying computer readable code representing instructions ..." embodying that same functional descriptive material is neither a process nor a product (i.e., a tangible "thing") and therefore, does not fall within one of the four statutory classes of §101. Rather, "signal" is a form of energy, in the absence of any physical structure or tangible material

Regarding claims 10 and 18 which define a computer program comprising instructions..." with descriptive material. While "functional descriptive material" may be claimed as a statutory product (i.e., "manufacture") when embodied on a tangible computer readable medium, a computer program comprising instructions..." embodying that same functional descriptive material is neither a process nor a product (i.e., a tangible "thing") and therefore, does not fall within one of the four statutory classes of

§101. Rather, "signal" is a form of energy, in the absence of any physical structure or tangible material

Claims 11 and 19 define a signal with descriptive material. While "functional descriptive material" may be claimed as a statutory product (i.e., a "manufacture") when embodied on a tangible computer readable medium, a signal embodying that same functional descriptive material is neither a process nor a product (i.e., a tangible "thing") and therefore does not fall within one of the four statutory classes of §101. Rather, "signal" is a form of energy, in the absence of any physical structure or tangible material.

Claim Rejections - 35 USC § 112

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 9-11 and 17-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
3. Regarding claims 9-11 and 17-19, page 4. The specification does not mention or disclose a computer or processor based system.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-8, 12-13, and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukunaga EP 0 763 944 A2.

6. Regarding **claim 1**, Fukunaga teaches A method of transmitting video data, comprising the steps of: encoding a first sequence of video frames; encoding a second sequence of video frames corresponding to said first sequence of video frames (fig. 1), all video frames in said second sequence predicted from a single reference frame (column 3 line 8-11, and fig. 25) ; transmitting data from said first sequence to a receiver (fig. 1) ; on receiving from the receiver an indication that one or more frames in said first sequence is corrupted, transmitting data corresponding to said one or more corrupted frames to the receiver from said second sequence of frames (column 13 line 57-column 14 line 13).

7. Regarding **claim 2**, Fukunaga teaches A method according to claim 1, further comprising: reverting back to transmitting data from said first sequence after, data from the second sequence has been transmitted to the receiver (column 6 line 25-27 and column 35-56 and fig.1, 302, 305, 307,308, and 309).

8. Regarding **claim 3**, Fukunaga teaches A method of compensating for transmission errors in a video data signal comprising: transmitting a first sequence of

video frames from a transmitter to a receiver (column 6 line 16-24), detecting one or more corrupted frames in said first sequence (column 12 line 45-50); generating an indication that one or more frames in said first sequence is/are corrupted (column 12 line 42-50); in response to said indication, transmitting frames corresponding to said one or more corrupted frames from a second sequence of video frames, said second sequence corresponding to said first sequence (column 13 line 45 to column 14 line 16 and fig. 11) all video frames in said second sequence predicted from a single reference frame (column 3 line 8-11).

9. Regarding **claim 4**, Fukunaga teaches A method according to claim 3, further comprising reverting back to transmitting frames from said first sequence after frames have been transmitted to the receiver from the second sequence (column 6 line 25-27 and column 35-56 and fig.1, 302, 305, 307,308, and 309).

10. Regarding **claim 5**, Fukunaga teaches A method according to claim 3, wherein the step of detecting corrupted frames is carried out at the receiver (column 13 line 59 to column 14 line 3).

11. Regarding **claim 6**, Fukunaga teaches A method according to claim 3, wherein the step of generating an indication that frames are corrupted is carried out at the receiver (column 13 line 59 to column 14 line 3, and fig. 2, 407).

12. Regarding **claim 7**, Fukunaga teaches A method according to claim 3, wherein the step of generating an indication that frames are corrupted includes the receiver generating an indication signal and transmitting the indication signal to the transmitter (column 13 line 59 to column 14 line 2. Further since the decoder returns a NACK

signal to the coder if there is a dropped or damaged frame in transmission, it is clear to the examiner that the decoder would generate a signal to indicate corrupted frames to the encoder).

13. Regarding **claim 8**, Fukunaga teaches A method according 3, wherein the step of transmitting frames from said second sequence is performed at the transmitter (column 6 line 16-24 and fig. 1, 307), the transmitted frames from said second sequence being received by the receiver (column 7 line 7-10 and fig. 2, 401).

14. Regarding **claim 12**, which recite a corresponding apparatus to the transmitting method of claim 1. Thus the analysis and rejection made in claim 1 also apply here because the method for transmitting video data would necessitate the apparatus in claim 12.

15. Regarding **claim 13**, see rejection and analysis for claim 2.

16. Regarding **claim 14**, Fukunaga teaches A System for compensating for transmission errors in a video data signal comprising: a transmitter for transmitting a first sequence of video frames (fig. 1); a receiver for receiving said first sequence (fig. 2); means for detecting one or more corrupted frames in said first sequence (column 12 line 42-50); means for transmitting frames corresponding to said one or more corrupted frames from a second sequence of video frames, said second sequence corresponding to said first sequence (column 13 line 53 to column 14 line 13), all video frames in said second sequence predicted from a single reference frame (column 3 line 8-11).

17. Regarding **claim 15**, Fukunaga teaches A system according to claim 14, wherein the means for detecting corrupted frames in said first sequence is at the receiver (fig. 2, 407).

18. Regarding **claim 16**, system according to claim 14 wherein the transmitter is operable to transmit frames from said second sequence to the receiver after detection of one or more corrupted frames in said first sequence (column 13 line 53 to column 14 line 13).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

21. Claims 9-11 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al., EP 0 763 944 A2.

22. Regarding claim 9, Although Fukunaga is silent in regards to the using a storage medium carrying computer readable code representing instructions for causing a

computer to execute the method, it would be obvious to one of ordinary skill in the art that when performing digital signal processing the use of a digital signal processor is used. Further a digital processor and computer program product for processing digital signals are functional equivalents of one another and are used interchangeably.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a storage medium carrying instructions to cause a computer to execute the claimed method for use when performing digital signal processing.

- 23. Regarding **claims 10-11**, see claim 9 above.
- 24. Regarding **claim 17**, see rejection and analysis for claim 9.
- 25. Regarding **claim 18**, see rejection and analysis for claim 10.
- 26. Regarding **claim 19**, see rejection and analysis for claim 11.

Examiner's Note

27. The referenced citations made in the rejection(s) above are intended to exemplify areas in the prior art document(s) in which the examiner believed are the most relevant to the claimed subject matter. However, it is incumbent upon the applicant to analyze the prior art document(s) in its/their entirety since other areas of the document(s) may be relied upon at a later time to substantiate examiner's rationale of record. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives

because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed....” In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
29. Kim et al., US- 6, 993,075 Systems and methods for reducing error propagation in a video data stream
30. Zhao et al., US- 6,940,903 System and methods for performing bit rate allocation for a video stream
31. Karczewicz et al., US- 2004/0114684 Switching between bit-streams in video transmission
32. Hannuksela et al., US-2001/0040700 Video coding.
33. Im et al., US-2006/0171666 Apparatus and method for recording/ reproducing moving picture in digital broadcast receiver
34. Curet et al. US-6,920,178 Method switching the video component(s) of a first digital, audi-visual program onto the video components of a second audio-visual digital, video-audio program to compensate their phase shift
35. Wee et al., US-6, 104,447A System for editing compressed image sequences
36. Hannuksela et al., US-7, 116,714 Video coding

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica Roberts whose telephone number is (571) 270-1821. The examiner can normally be reached on 7:30-5:00 EST Monday-Friday, Alt Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JMR/

Marsha D Banks-Harold

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